

## CONTENTS OF VOLUME 212

No. 1, January 1980

Chronic Haloperidol or Fluphenazine: Effects on Dopamine Metabolism in Brain, Cerebrospinal Fluid and Plasma of <i>Cercopithecus Aethiops</i> (Vervet Monkey). N. G. BACOPOULOS, D. E. REDMOND, J. BAULU AND R. H. ROTH	1
Possible Mechanisms of Reduction of Plasma Luteinizing Hormone by Ethanol. ROBERT E. CHAPIN, GEORGE R. BRESEE AND ROBERT A. MUELLER	6
Localization and Quantitation of Lithium in Rat Tissue following Intraperitoneal Injections of Lithium Chloride. II. Brain. S. C. NELSON, M. M. HERMAN, K. G. BENNSCH AND J. D. BARCHAS	11
Kinetic Studies on the Interaction between Botulinum Toxin Type A and the Cholinergic Neuromuscular Junction. LANCE L. SIMPSON	16
Hyperalgesic Effects of Divalent Cations and Antinociceptive Effects of a Calcium Chelator in Naive and Morphine-Dependent Mice. WILLIAM K. SCHMIDT AND E. LEONG WAY	22
Direct Effects of Ethanol on Myocardial Performance and Coronary Resistance. FRANCIS L. ABEL	28
Effects of Selective and Nonselective Beta Adrenergic Agents on Renin Secretion in Isolated Perfused Rat Kidney. HARUYUKI NAKANE, YOKO NAKANE, ANNIE ROUX, PIERRE CORVOL AND JOËL MENARD	34
Cellular Pharmacokinetics of Lipophilic Diaminopyrimidine Antifolates. WILLIAM R. GRECO AND MAIRE T. HAKALA	39
The Effect of Misonidazole on Some Physiologic Parameters in Mice. P. J. CONROY, R. VON BURG, W. PASSALACQUA AND R. M. SUTHERLAND	47
The Effect of Acute Administration of an Angiotensin Converting Enzyme Inhibitor, Captopril (SQ 14,225), on Experimentally Induced Thirst in Rats. CHRISTOPHER C. BARNEY, MICHAEL J. KATOVICK AND MELVIN J. FREGLY	53
Mechanism of the Antihypertensive Action of Clonidine on the Pressor Response to Physostigmine. JERRY J. BUCCAFUSCO, JOHN P. M. FINBERG AND SYDNEY SPECTOR	58
Poststimulation Catecholamine Synthesis and Tyrosine Hydroxylase Activation in Central Noradrenergic Neurons. I. <i>In Vivo</i> Stimulation of the Locus Coeruleus. PHYLLIS M. SALZMAN AND ROBERT H. ROTH	64
Poststimulation Catecholamine Synthesis and Tyrosine Hydroxylase Activation in Central Noradrenergic Neurons. II. Depolarized Hippocampal Slices. PHYLLIS M. SALZMAN AND ROBERT H. ROTH	74
Effects of Drugs on Behavior in Pigeons Tolerant to $\Delta^9$ -Tetrahydrocannabinol. D. E. McMILLAN, J. D. LEANDER AND KENNETH H. DUDLEY	85
Effects of Norlaudanosolinecarboxylic Acids on Enzymes of Catecholamine Metabolism. C. J. COSCIA, W. J. BURKE, M. P. GALLOWAY, A. H. KOSLOFF, J. M. LASALA, J. MCFARLANE, J. S. MITCHELL, M. M. O'TOOLE AND B. L. ROTH	91
Clearance of 5-Hydroxytryptamine by Rat Lung and Liver: The Importance of Relative Perfusion and Intrinsic Clearance. DAVID A. WIERSMA AND ROBERT A. ROTH	97
The Metabolism of 1- <i>n</i> -Butyl-5,5-diethylbarbituric Acid ( <i>N-n</i> -Butyl Barbital) in the Rat. II. Distribution of the Drug and Its Metabolites in Various Tissues <i>In Vivo</i> and in Isolated Perfused Liver System. MARY VORE AND MILTON T. BUSH	103
The Pulmonary Clara Cell as a Target for Toxic Chemicals Requiring Metabolic Activation; Studies with Carbon Tetrachloride. MICHAEL R. BOYD, CHARLES N. STATHAM AND NANCY S. LONGO	109
<i>p</i> -Lodoamphetamine as a Serotonin Depletor in Rats. RAY W. FULLER, HAROLD D. SNODDY, ANDREW M. SNODDY, SUSAN K. HEMRICK, DAVID T. WONG AND BRYAN B. MOLLOY	115
Maturation of Sympathetic Neurotransmission in the Rat Heart I. Ontogeny of the Synaptic Vesicle Uptake Mechanism and Correlation with Development of Synaptic Function. Effects of Neonatal Methadone Administration on Development of Synaptic Vesicles. DONNA LYNN BAREIS AND THEODORE A. SLOTKIN	120
Maturation of Sympathetic Neurotransmission in the Rat Heart. II. Enhanced Development of Presynaptic and Postsynaptic Components of Noradrenergic Synapses as a Result of Neonatal Hyperthyroidism. CHRISTOPHER LAU AND THEODORE A. SLOTKIN	126
Acute and Chronic Effects of Barbiturates on Depolarization-Induced Calcium Influx into Synaptosomes from Rat Brain Regions. STEVE V. ELROD AND STEVEN W. LESLIE	131
The Benzodiazepine Receptor: Its Development and Its Modulation by $\gamma$ -Aminobutyric Acid. JOHN W. REGAN, WILLIAM R. ROESKE AND HENRY I. YAMAMURA	137
Dopamine and Alpha Adrenoceptor Agonists Inhibit Neurotransmission in the Cat Spleen Through Different Presynaptic Receptors. M. L. DUBOCOVICH AND S. Z. LANGER	144
Attenuation of the Effect of Punishment by Thyrotropin-Releasing Hormone: Comparisons with Chlordiazepoxide. R. A. VOGEL, G. D. FRYE, J. H. WILSON, C. M. KUHN, R. B. MAILMAN, R. A. MUELLER AND G. R. BRESEE	153
Evaluation of Pulmonary Mechanics in Guinea Pigs during Respiratory Anaphylaxis. M. C. HOLROYDE, S. Y. SMITH AND G. HOLME	162
<i>N</i> -Acyl- $\gamma$ -Glutamyl Derivatives of Sulfamethoxazole as Models of Kidney-Selective Prodrugs. MARION ORLOWSKI, HARUKO MIZOGUCHI AND SHERWIN WILK	167
Pharmacokinetics and Pharmacodynamics in Young Normal and Elderly Hypertensive Subjects: A Study Using Sotalol as a Model Drug. TAKASHI ISHIZAKI, HIROKI HIRAYAMA, KAZUJI TAWARA, HARUAKI NAKAYA, MACHIKO SATO AND KOICHI SATO	173

No. 2, February 1980

Dependence of the Chronotropic Effects of Calcium, Magnesium and Sodium on Temperature and Cycle Length in Isolated Rabbit Atria. TOBIAS OPT HOF, ALBERT J. C. MACKAAY, WIM K. BLEEKER, JOOP M. HOUTKOOPER, REINKO ABELS AND LENNART N. BOUMAN	183
Diuretic and Uricosuric Activity of 6,7-Dichloro-2,3-Dihydro-5-(2-Thienylcarbonyl)Benzofuran-2-Carboxylic Acid and Stereoisomers in Chimpanzee, Dog and Rat. G. M. FANELLI, JR., L. S. WATSON, D. L. BOHN AND H. F. RUSSO	190

The Effects of Ketamine Enantiomers on Schedule-Controlled Behavior in the Rat. C. J. MELISKA, A. J. GREENBERG AND A. J. TREVOR	198
Thyrotropin-Releasing Hormone: Neurogenesis of Actions in the Pentobarbital Narcotized Rat. PETER W. KALIVAS AND AKIRA HORITA	203
Neonatal Feminization of Hepatic Mono-Oxygenase in Adult Male Rats: Altered Sexual Dimorphic Response to Cadmium. E. M. K. LUI AND G. W. LUCIER	211
Inotropic Actions of Diacetyl Monoxime in Cat Ventricular Muscle. JAY R. WIGGINS, JOSEPH REISER, DAVID F. FITZPATRICK AND JAMES L. BERGEY	217
Blockade by AntiGlucocorticoids, Actinomycin D and Cycloheximide of Anti-Inflammatory Action of Dexamethasone against Bradykinin. SUSUMU TSURUFUJI, KAZUO SUGIO, FUMIHIKO TAKEMASA AND SATOKO YOSHIZAWA	225
Limitations of Presynaptic Adrenoceptor Theory: The Characteristics of the Effects of Noradrenaline and Phenoxybenzamine on Stimulation-Induced Efflux of [ <sup>3</sup> H]Noradrenaline in Vas Deferens. STANLEY KALSNER	232
Effect of Salicylates and Phenobarbital on Hepatic Gluthione in the Rat. N. KAPLOWITZ, J. KUHLENKAMP, L. GOLDSTEIN AND J. REEVE	240
Release of a Prostacyclin-Like Substance into the Circulation of Dogs by Intravenous Adenosine 5'-Diphosphate. DIANE P. HEMKER, RONALD J. SHEBUSKI AND JAMES W. AIKEN	246
Calcium Dependence of Norepinephrine-Induced Vascular Contraction in Experimental Diabetes. MARY P. OWEN AND GERALD O. CARRIER	253
Monoamine Oxidase Inhibitors and Serotonin Uptake Inhibitors: Differential Effects on [ <sup>3</sup> H]Serotonin Binding Sites in Rat Brain. DANIEL D. SAVAGE, JOE MENDELS AND ALAN FRAZER	259
Serum Protein Binding of Drugs during and after Pregnancy in Rats. BERESFORD STOCK, MARGARET DEAN AND GERHARD LEVY	264
Increased Tryptophan Hydroxylase Activity may Compensate for Decreased Brain Tryptophan Levels in Streptozotocin-Diabetic Rats. MICHAEL E. TRULSON AND ROBERT G. MACKENZIE	269
Effect of Ethanol Pretreatment on the Pharmacokinetics of Nicotine in Rats. JOSEPH ADIR, WILLIAM WILDFEIER AND RICHARD P. MILLER	274
Effects of Cocaine and Morphine on Concurrent Schedule-Controlled Performances. ALFRED V. BACOTTI	280
Interaction of a DDT-Analog with the Sodium Channel of Lobster Axon. C. H. WU, G. S. OXFORD, T. NARAHASHI AND G. HOLAN	287
Regional Blood Flow and Cardiac Responses to Hydralazine. ERIC G. SPOKAS AND HSUEH-HWA WANG	294
Effects of $\alpha$ -Methyl-dopa and Its Metabolites on Prolactin Release: <i>In Vivo</i> and <i>in Vitro</i> Studies. JANE F. WIGGINS, ALAN F. SVED AND JOHN D. FERNSTROM	304
Renal Clearance of Salicylic Acid and Salicyluric Acid in the Rat and in the Isolated Perfused Rat Kidney. IHOR BEKERSKY, LOUIS FISHMAN, STANLEY A. KAPLAN AND WAYNE A. COLBURN	309
Sodium-Potassium Activated Adenosine Triphosphatase Activity as a Measure of Neuronal Membrane Characteristics in Ethanol-Tolerant Mice. MILICA LEVENTAL AND BORIS TABAKOFF	315
Ouabain Increases Left Atrial Stretch Receptor Discharge in the Dog. IRVING H. ZUCKER, THOMAS V. PETERSON AND JOSEPH P. GILMORE	320
Influence of Isoproterenol and Methylisobutylxanthine on the Contractile and Cyclic Nucleotide Effects of Methacholine in Isolated Rat Atria. BARRY S. BROWN, JAMES B. POLSON, JOSEPH J. KRZANOWSKI AND JAY R. WIGGINS	325
The Relationship between Serum Gastrin, Gastric Ulceration and Basal Acid Output in the Polyarthritic Rat. PERSHOTTAM P. MATHUR AND ROBERT D. SMYTH	333
Radiohistochemical Localization of Benzodiazepine Receptors in Rat Brain. W. SCOTT YOUNG, III AND MICHAEL J. KUHAR	337
Cardiac Electrophysiologic Properties of <i>dL</i> -Propanolol, <i>d</i> -Propranolol, <i>L</i> -Propranolol and <i>dl</i> -Pindolol in Anesthetized Dogs. P. JAILLON, J. HECKLE, J. WEISSENBURGER AND G. CHEMIMOL	347
Accumulation of Anionic Pesticides by Rabbit Choroid Plexus <i>in Vitro</i> . JOHN B. PRITCHARD	354

No. 3, March 1980

Inhibition of Lysosomal Lipases by Chlorpromazine: A Possible Mechanism of Stabilization. ROBIN C. RUTH, KENNETH OWENS AND WILLIAM B. WEGLICKI	361
Discriminative Stimulus Effects of Cyclazocine in the Rat. JANICE J. TEAL AND STEPHEN G. HOLTZMAN	368
Increased Penetration of Nonelectrolytes into Mouse Skin during Iontophoretic Water Transport (Iontohydrokinesis). LOUIS P. GANGAROSA, NO-HEE PARK, CAROL A. WIGGINS AND JAMES M. HILL	377
Fluoronorepinephrines: Specific Agonists for the Activation of <i>Alpha</i> and <i>Beta</i> Adrenergic-Sensitive Cyclic AMP-Generating Systems in Brain Slices. J. W. DALY, W. PADGETT, Y. NIMITKITPAISAN, C. R. CREVELING, D. CANTACUZENE AND K. L. KIRK	382
Effects of Acute and Chronic Amphetamine Treatment on Purkinje Neuron Discharge in Rat Cerebellum. ROBERT FREEDMAN AND JWAHARLAL MARWAHA	390
An Evaluation of the Mechanism by which Serotonergic Activation Depresses Respiration. DAG B. A. LUNDBERG, ROBERT A. MUELLER AND GEORGE R. BREESE	397
Second-Order Schedules of Intramuscular Cocaine Injection in the Squirrel Monkey: Comparisons with Food Presentation and Effects of <i>d</i> -Amphetamine and Promazine. JONATHAN L. KATZ	405
Natriuretic Effect of (7-Glycine) Oxytocin in the Presence of Diuretic Agents in Conscious Rats. CHARLES T. STIER, JR., MAURICE MANNING AND WILBUR H. SAWYER	412
Interaction between Intestinal Absorption and Secretion of Monoquaternary Ammonium Compounds in Guinea Pigs—A Concept for the Absorption Kinetics of Organic Cations. KLAUS TURNHEIM AND FRITZ LAUTERBACH	418
Ethanol and Sympathetic Denervation Effects on Rat Adrenal Catecholamine Turnover. LAWRENCE B. COHEN, EDWARD M. SELLERS, EDWARD A. SELLERS AND K. V. FLATTERY	425
Effect of Dopamine on Length of Gestation and on the Release of Fetal Oxytocin in Rats. J. A. SCHRIEFER, P. R. LEWIS AND J. W. MILLER	431
Some Effects of Clozapine on Punished Responding by Mice and Squirrel Monkeys. ROGER D. SPEALMAN AND JONATHAN L. KATZ	435
Naloxone Treatment of Endotoxin Shock: Stereospecificity of Physiologic and Pharmacologic Effects in the Rat. ALAN I. FADEN AND JOHN W. HOLADAY	441

Metabolism and Rate of Elimination of Digoxigenin Bisdigitoxoside in Dogs Before and During Chronic Azotemia. KLAUS D. GIERKE, PENELOPE E. GRAVES, DONALD PERRIER, FRANK I. MARCUS, MICHAEL MAYERSOHN AND STEVEN GOLDMAN	448
Mechanism for the Potentiation of Oxygen Toxicity by Disulfiram. HENRY JAY FORMAN, JONATHAN L. YORK AND ARON B. FISHER	452
Intracisternal Dose-Response Analysis of 6-Hydroxydopamine-Induced Noradrenergic Sprouting in the Neonatal Rat Cerebellum. RICHARD H. SCHMIDT AND RANBIR K. BHATNAGAR	456
The Effect of Typical and Atypical Neuroleptics on Binding of [ <sup>3</sup> H]Spiroperidol in Calf Caudate. CHUN WEL LIN, SAUL MAAYANI AND SHERWIN WILK	462
Relaxation of Bovine Coronary Arterial Smooth Muscle by Cyclic GMP, Cyclic AMP and Analogs. STEVEN A. NAPOLI, CARL A. GRUETTER, LOUIS J. IGNARRO AND PHILIP J. KADOWITZ	469
Factors Regulating Drug Cue Sensitivity: Limits of Discriminability and the Role of a Progressively Decreasing Training Dose in Fentanyl-Saline Discrimination. FRANCIS C. COLPAERT, CARLOS J. E. NIEMEGEERS AND PAUL A. J. JANSEN	474
Renin Release: Effects of Vasodilators and Bilateral Ureteral Obstruction. LUIZ NASCIMENTO, ANDREW P. HARRIS, JOSÉ M. AYALA, SUSAN OPAVA-STITZER AND MANUEL MARTINEZ-MALDONADO	481
Clonidine Delays Small Intestinal Transit in the Rat. M. J. RUWART, M. S. KLEPPER AND B. D. RUSH	487
Effect of a Prostaglandin E <sub>2</sub> Analog on Gastric Emptying and Secretion in Rhesus Monkeys. D. NOMPLEGGI, L. MYERS, D. O. CASTELL AND A. DUBOIS	491
Effect of Morphine and Naloxone on Leu-Enkephalin-Like Immunoreactivity in Dogs. L. H. LAASBERG, E. E. JOHNSON AND J. HEDLEY-WHYTE	496
Differential Distribution of <i>Beta</i> -1 and <i>Beta</i> -2 Adrenergic Receptors in Cat and Guinea-Pig Heart. A. HEDBERG, K. P. MINNEMAN AND P. B. MOLINOFF	503
Toxicogenetics of Niridazole in Inbred Mice. JEFFREY L. BLUMER, JANNEY M. SIMPSON, SAMUEL V. LUCAS AND LESLIE T. WEBSTER, JR.	509
Cardiovascular Profile of Mixidine Fumarate, a Compound which Attenuates Myocardial Chronotropic Responses. T. P. PRUSS, W. E. HAGEMAN AND H. I. JACOBY	514
ATP-Induced Hyperpolarization of Smooth Muscle Cells of the Guinea-Pig Coronary Artery. Y. TAKATA AND H. KURIYAMA	519
Release of Norepinephrine Induced by Preganglionic Stimulation of the Isolated Superior Cervical Ganglion of the Cat. A. E. MARTINEZ AND E. ADLER-GRASCHINSKY	527
Modulatory Role of <i>Alpha</i> Adrenoceptors on the Release of [ <sup>3</sup> H]Norepinephrine Elicited by Preganglionic Stimulation of the Cat Superior Cervical Ganglion. A. E. MARTINEZ AND E. ADLER-GRASCHINSKY	533
Cholinergic, Adrenergic and Purinergic Response of Sequential Strips of Rabbit Urinary Bladder. ROBERT M. LEVIN, FRANCES S. SHOFER AND ALAN J. WEIN	536
Kinetic Studies on the Entry of <i>d</i> -Amphetamine into the Central Nervous System: I. Cerebrospinal Fluid. LANCE L. SIMPSON AND AMIRAM BARKAI	541
Alteration of Synaptic Membrane Fatty Acid Composition and Anesthetic Requirement. DONALD D. KOBLIN, DAVID E. DONG, JOAN E. DEADY AND EDMOND I. EGER, II	546
Fiber-Type Effects of Castration on the Cholinergic Receptor Population in Skeletal Muscle. HAROLD CHIN AND RICHARD R. ALMON	553
Protective Effects of Dimethyl-Propranolol (UM-272) during Global Ischemia of Isolated Feline Hearts. W. MARK VOGEL, JOSEPH L. ROMSON, LARRY R. BUSH, MARSHAL SHLAFER AND BENEDICT R. LUCCHESI	560
$\beta$ -Adrenergic Receptor-Mediated Regulation of Cyclic Nucleotide Phosphodiesterase in C6 Glioma Cells: Vinblastine Blockade of Isoproterenol Induction. JOAN P. SCHWARTZ AND E. COSTA	569
Naloxone-Induced Increases in Serum Luteinizing Hormone in the Male: Mechanisms of Action. THEODORE J. CICERO, CAROL E. WILCOX, ROY D. BELL AND EDWARD R. MEYER	573
Comparison of the Autonomic Effects of Procainamide and N-Acetylprocainamide in the Dog. ROBERT D. REYNOLDS AND RICHARD J. GORCZYNSKI	579
Dependence of the Airway and Pulmonary Vascular Effects of Arachidonic Acid upon Route and Rate of Administration. ERNST WM. SPANNHAKE, ALBERT L. HYMAN AND PHILIP J. KADOWITZ	584
Index, Volume 212, January–March, 1980	591

